

Correspondence

TO THE EDITOR, *British Journal of Venereal Diseases*

Sir,

Chlamydia culture service

We read with interest the paper by J R Willcox *et al*¹ advocating a routine chlamydial isolation service. They found that almost 40% of *Chlamydia trachomatis*-positive female patients had no history of contact with a patient with urethritis and therefore would not have received antichlamydial therapy. Kinghorn and Waugh² have recently published similar data. The results of previous series,^{3 4} however, have suggested that chlamydia are rarely found in the absence of a history of contact with either nongonococcal urethritis (NGU) or gonorrhoea.

We are conducting a study of unselected female patients attending two venereal disease clinics. So far, *C trachomatis* has been isolated from 50 (21%) of 241 patients, a figure compatible with those of other studies.¹⁻⁴ Of these 50 patients, 40 had a definite history of contact with a man suffering from NGU, gonorrhoea, or an unspecified urethritis, and another two women had an infection with *Neisseria gonorrhoeae* and can therefore be presumed to have had a contact in the above categories. Only eight (16%) chlamydia-positive patients therefore had no contact history at all. If our study is analysed in terms of diagnostic categories, 25 (31%) of 81 contacts of NGU and 15 (33%) of 44 contacts of gonorrhoea were chlamydia-positive but only eight (7%) of 116 patients with no contact history were chlamydia-positive.

In the absence of a chlamydial isolation service, at present only those patients who have a history of contact with NGU are considered for antichlamydial therapy. It has, however, been suggested⁵ that women with gonorrhoea or with a history of contact with gonorrhoea should receive a treatment regimen which is effective against chlamydia in the absence of any simple screening test for the diagnosis of postgonococcal cervicitis. Our results suggest that if all women with a history of contact with NGU or gonorrhoea or with an infection with *N gonorrhoeae* had received antichlamydial therapy, only a

small proportion of chlamydia-positive patients would have remained untreated.

There thus seem to be two possibilities in dealing with the reservoir of female chlamydial infection in the community: either a routine chlamydial isolation service analogous to that for *N gonorrhoeae* is set up for every clinic or therapeutic regimens are designed which will eradicate a large proportion of chlamydial infections. Although others^{1 2} may feel that their results indicate that laboratory assistance is essential for treatment, our results lead us to believe that institution of such therapeutic regimens would be a justifiable course of action. We do not believe that it would be cost-effective with present chlamydial isolation techniques to set up a routine service and we would favour the restriction of chlamydial isolation to epidemiological and other studies.

We would like to thank Drs G Csonka and J Nabarro for access to patients under their care.

Yours faithfully,
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References

1. Willcox JR, Fisk PG, Barrow J, Barlow D. The need for a chlamydia culture service. *Br J Vener Dis* 1979;55:281-3.
2. Kinghorn GR, Waugh MA. (Letter) *Br Med J* 1979;ii:44.
3. Oriel JD, Powis PA, Reeve P, Miller A, Nicol CS. Chlamydial infections of the cervix. *Br J Vener Dis* 1974;50:11-16.
4. Hilton AL, Richmond SJ, Milne JD, Hindley F, Clarke SKR. *Chlamydia A* in the female genital tract. *Br J Vener Dis* 1974;50:1-10.
5. Richmond SJ, Oriel JD. Recognition and management of genital chlamydial infection. *Br Med J* 1978;ii:480-3.

TO THE EDITOR, *British Journal of Venereal Diseases*

Sir,

Effect of probenecid on amoxycillin

In common with many other doctors, I find the mathematics of clinical pharmacology difficult and would be grateful for some

clarification of the information in the paper by Barbhaiya *et al*¹ about the effect of probenecid on amoxycillin. They say that the AUC was taken as a measure of relative absorption of amoxycillin in the presence and absence of probenecid, and they found it to be increased with probenecid. This would seem to imply that amoxycillin is better absorbed when probenecid is present, although it is not obvious why the AUC differences could not be simply due to the change in excretion. Or is "relative absorption" a technical term meaning "absorption relative to metabolism/excretion"?

It is well known that probenecid delays the excretion of penicillins, but while the prolonged concentrations obtained can be accounted for by this alone, the mechanism causing increased concentrations is less clear. It has been shown that delayed excretion is insufficient to account for the extent of the increased serum concentrations, but the suggestion is that probenecid interferes with the distribution of the antibiotics in the body rather than increasing their absorption.²⁻⁴ The implication of this is that although impressive serum concentrations are obtained, these are achieved at the expense of antibiotic in the tissues.

In view of the clinical results, this is obviously not a critical factor in the single-dose therapy of urethral gonorrhoea, but it could be important in other situations such as the treatment of gonococcal salpingitis. The relationship between serum and tissue concentrations of amoxycillin seems to be similar to that of ampicillin,⁵ and it has been shown that the concentration of ampicillin in the Fallopian tubes is only one-quarter of that in the serum.⁶ It must be at least a possibility that the addition of probenecid would further lower the concentrations in the Fallopian tubes, exactly the opposite of the effect that might have been expected.

Yours faithfully,
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References

1. Barbhaiya R, Thin RN, Turner P, Wadsworth J. Clinical pharmacological studies of amoxycillin: effect of probenecid. *Br J Vener Dis* 1979;55:211-3.

2. Gibaldi M, Schwartz MA. Apparent effect of probenecid on the distribution of penicillin. *Clin Pharmacol Ther* 1968;9:345-9.
3. Gibaldi M, Davidson, D, Plant ME, Schwartz MA. Modification of penicillin distribution and elimination by probenecid. *Int J Clin Pharmacol* 1970;3:182-9.
4. Ziv G, Sulman FG. Effects of probenecid on the distribution, elimination, and passage into milk of penicillin, ampicillin and cloxacillin. *Arch Int Pharmacodyn Ther* 1974;207:373-82.
5. Tan JS, Bannister T, Pari JP. Level of amoxycillin in human serum and interstitial fluid. *J Inf Dis* 1974;129 suppl June:146.
6. Elder MG, Bywater MJ, Reeves DS. Pelvic tissue and serum concentrations of various antibiotics. *Br J Obstet Gynaecol* 1977;84:887-93.

***A copy of this letter was sent to the authors, whose reply is printed below. ED, BJVD.

Sir,

We are grateful to Dr Woodcock for drawing attention to the important question of a possible effect of probenecid on the apparent volume of distribution of amoxycillin. Although he rightly points out that Gibaldi and co-workers had suggested that such an effect occurs, we would refer him to a later paper by Jusko and Gibaldi,¹ in which they demonstrated that, while alteration of elimination produces a change in the

degree of equilibration of a drug between the central and peripheral compartments which affects certain apparent "volume of distribution" parameters, no change in distribution mechanisms or space necessarily occurs. After reanalysing their original data, they concluded that "the distribution rates and space of penicillin do not appear to be significantly altered by probenecid...".

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Reference

1. Jusko WJ, Gibaldi M. Effects of change in elimination on various parameters of the two-compartment open model. *J Pharm Sci* 1972;61:1270-3.

TO THE EDITOR, *British Journal of Venereal Diseases*

Sir,

Piperacillin

I refer to the paper by Waterworth *et al*,¹ which reported on the anticonoccal

activity of a number of agents including piperacillin.

In the last paragraph of this article, it is stated that piperacillin is a carbenicillin. So as to avoid any misunderstanding, I should point out that piperacillin is in fact a dioxopiperazinylacetyl derivative of ampicillin and its structure and activity are sufficiently different from carbenicillin to make the statement inaccurate.

Yours faithfully,
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Reference

1. Waterworth PM, Oriel JD, Ridgway GL, Subramanian S. Single-dose minocycline in the treatment of gonococcal urethritis. *Br J Vener Dis* 1979;55:343-7.

***This letter has been shown to Dr Waterworth, who agrees that a more accurate description would have been "carbenicillin-like." ED, BJVD.